

Claims

1. A method for a base site to initiate a CDMA-dispatch soft handoff comprising the steps of:
- 5 establishing a first outbound link for a dispatch call;
transmitting the dispatch call via the first outbound link;
establishing an inbound link with a mobile station (MS) for the dispatch call;
determining based on a signal quality of the inbound link that the
10 MS should begin a soft handoff;
determining at least one base site of a plurality of adjacent base sites for the MS to begin a soft handoff with; and
indicating to the MS an identity of the at least one base site and an identity of an outbound link at the at least one base site.
- 15 2. The method of claim 1 wherein the step of determining at least one base site comprises the step of requesting at least one base site of a plurality of adjacent base sites to determine a signal quality of the inbound link as received at each of the at least one base sites.
- 20 3. The method of claim 2 wherein the step of requesting to determine a signal quality comprises providing the at least one base site of the plurality of adjacent base sites with the long code of the MS.
- 25 4. The method of claim 2 wherein the step of determining at least one base site comprises the steps of:
receiving from at least one base site of the plurality of adjacent base sites an indication of a signal quality of the inbound link; and
selecting an adjacent base site based on the at least one indication
30 of a signal quality of the inbound link.

5. The method of claim 4 wherein the step of determining at least one base site comprises the steps of:

requesting support for a soft handoff from the adjacent base site;
and

5 receiving an indication of a second outbound link at the adjacent base site enabling the soft handoff.

6. The method of claim 1 wherein the inbound link comprises a low-rate inbound link used to communicate at least one of forward power control information and reverse power information.
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7. The method of claim 1 wherein the first outbound link comprises a full-rate CDMA outbound traffic channel.

15 8. The method of claim 1 wherein the step of indicating comprises the step of signaling in-band on the first outbound link the identity of the at least one base site and the identity of an outbound link at the at least one base site.

20 9. The method of claim 1 wherein the step of indicating comprises the step of signaling via a paging channel.

10. The method of claim 9 wherein the step of signaling via a paging channel comprises the step of transmitting a broadcast page to convey
25 the identity of the at least one base site and the identity of an outbound link at the at least one base site.

11. The method of claim 1 wherein the step of indicating to the MS comprises the step of indicating the identity of the MS with the identity of
30 the at least one base site and the identity of an outbound link at the at least one base site.

12. The method of claim 1 wherein the step of indicating to the MS the identity of the at least one base site comprises transmitting to the MS a pseudorandom noise scrambling code offset of the at least one base site
5 base site.

13. The method of claim 1 wherein the step of indicating to the MS the identity of an outbound link at the at least one base site comprises transmitting to the MS a CDMA code used for an outbound link at the at
10 least one base site.

14. A base site comprising:

a receiver;

a transmitter; and

a controller, coupled to the receiver and the transmitter, adapted to

5 establish a first outbound link for a dispatch call, adapted to instruct the transmitter to transmit the dispatch call via the first outbound link, adapted to establish an inbound link with a mobile station (MS) for the dispatch call using the receiver, adapted to determine based on a signal quality of the inbound link that the MS should begin a soft handoff, adapted to
10 determine at least one base site of a plurality of adjacent base sites for the MS to begin a soft handoff with, and adapted to indicate to the MS using the transmitter an identity of the at least one base site and an identity of an outbound link at the at least one base site.

15 15. The base site of claim 14 wherein the controller is further adapted to request at least one base site of a plurality of adjacent base sites to determine a signal quality of the inbound link as received at each of the at least one base sites.

20 16. The base site of claim 15 wherein the controller is further adapted to receive from at least one base site of the plurality of adjacent base sites an indication of a signal quality of the inbound link and to select an adjacent base site based on the at least one indication of a signal quality of the inbound link.

25 17. The base site of claim 16 wherein the controller is further adapted to request support for a soft handoff from the adjacent base site and to receive an indication of a second outbound link at the adjacent base site enabling the soft handoff.

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18. The base site of claim 14 wherein the inbound link comprises a low-rate inbound link used to communicate at least one of forward power control information and reverse power information.

5 19. The base site of claim 14 wherein the first outbound link comprises a full-rate CDMA outbound traffic channel.

20. The base site of claim 14 wherein the controller instructs the transmitter to transmit signaling in-band on the first outbound link to
10 convey the identity of the at least one base site and the identity of an outbound link at the at least one base site.

21. The base site of claim 14 wherein the controller instructs the transmitter to transmit a broadcast page via the paging channel to convey
15 the identity of the at least one base site and the identity of an outbound link at the at least one base site.